		RIPTION OF THE MATERIAL ON THESE DRAWINGS AND SPECIFICATIONS. THE FIRST MANUF STANDARD COLOR" INDICATES FACTORY FINISH AVAILABLE AT NO ADDITIONAL CHARGE. DESCRIPTION	APPROVED MANUFACTURERS
1		INFORMATION OUTLET, WALL MOUNT, 6-PORT COVERPLATE AS INDICATED ON	
	▼ · ▼ · The state of the state of the</td <td>DRAWINGS, SEE INFORMATION OUTLET SCHEDULE TN500 FOR PIN CONFIGURATION. # INDICATES QUANTITY OF EACH TYPE OF JACK. FILLED SIDE IS VOICE, OPEN SIDE IS DATA.</td> <td></td>	DRAWINGS, SEE INFORMATION OUTLET SCHEDULE TN500 FOR PIN CONFIGURATION. # INDICATES QUANTITY OF EACH TYPE OF JACK. FILLED SIDE IS VOICE, OPEN SIDE IS DATA.	
		" W "PROVIDE (1) RJ-45 JACK FOR VOICE AT +48" AFF FOR WALL HUNG PHONE. PROVIDE WITH STAINLESS STEEL FACEPLATE, MATING LUGS. INSTALL INFORMATION OUTLET IN A 4" SQUARE BACKBOX WITH A SINGLE GANG	
		PLASTER RING. INSTALL A 1" EMT CONDUIT TO THE NEAREST CABLE TRAY OR LADDER RACK PROVIDE REMOVABLE BLANK INSERTS FOR UNUSED PORTS	
2		FURNITURE WHIP. PROVIDE CONNECTION FROM FLOOR BOX TO OWNER PROVIDED FURNITURE.	*
3	$\stackrel{ t M}{ o}$	INFORMATION OUTLET, WALL MOUNT CATY, 2 PORT COVERPLATE, POPULATE WITH THE FOLLOWING CONNECTOR AS NOTED ON THE PLANS.	•
		ONE (1) F-TYPE CONNECTOR FOR CATV SIGNAL DISTRIBUTION AND ONE BLANK. INSTALL INFORMATION OUTLET IN A 4" SQUARE BACKBOX WITH A SINGLE GANG PLASTER RING. INSTALL A 1" EMT CONDUIT TO ABOVE ACESSIBLE CEILING.	
1	E M	EMERGENCY INTERCOM STATION. VANDAL RESISTANT EMERGENCY POWER. LIGHT/STROBE INSTALLED IN ACRYLIC HOUSING LED LIGHTING FOR FACEPLATE.	•
		STEEL WITH MULTI-COAT RUST INHIBITIVE COATING. STROBE - 1.5 MILLION CANDLE POWER. 20 FLASHES PER SECOND. BLUE LIGHT - 7 WATT HIGH EFFICIENCY, 10,000 HOUR COMPACT FLUORESCENT. COLOR AND LETTERING TO BE COORDINATED WITH OWNER PRIOR TO INSTALLATION. PROVIDE WITH CAMERA DOME	
		AT THE TOP OF THE TOWER. IP—SUBSTATION. ONE BUTTON CALL INTEGRATED WEB SERVER. REMOTE SOFTWARE UPGRADEABLE AND MONITORING, WIDE BANDWIDTH FOR AUDIO, VANDAL RESISTANT.	
5	MAS	EMERGENCY CALL STATION MASTER AND AUDIO SERVER. WALL SHELF OR 19" RACK MOUNTABLE INCLUDE POWER SUPPLY PROCESSOR BOARD, PROVIDE STATION LICENSING AS REQUIRED, (MINIMUM OF 24), 524 IP STATION CAPACITY. MASTER	
		STATION SHALL BE AN IP DESKTOP STATION. 85DB AUDIO PRESSURE 1 METER FROM SPEAKER, HIGH CONTRAST DISPLAY, 10 PROGRAMABLE SOFT KEYS, CALL QUEUING AND 256 LEVELS OF PRIORITY.	
6	V	INFORMATION OUTLET, FLOORBOX OR POKE—THROUGH MOUNT, 6—PORT COVERPLATE AS INDICATED ON DRAWINGS, SEE INFORMATION OUTLET SCHEDULE TN302 FOR PIN CONFIGURATION. INSTALL INFORMATION OUTLET IN E.C. PROVIDED FLOORBOX. PROVIDE ADAPTER	
		PLATE FOR 106—TYPE FACEPLATE WHERE REQUIRED. COORDINATE ADDITIONAL MOUNTING REQUIREMENTS WITH E.C. PROVIDE REMOVABLE BLANK INSERTS FOR UNUSED PORTS.	
7	®	INFORMATION OUTLET, CEILING MOUNT, 2-PORT COVERPLATE AS INDICATED ON DRAWINGS, SEE INFORMATION OUTLET SCHEDULE ON TN500. INSTALL DEPORT TO OUTLET IN A 4" SQUARE BACKBOX WITH A SINGLE GANG	
		PLASTER RING. INSTALL A 1" EMT CONDUIT 6" BEYOND BOX AND TERMINATE WITH A NYLON BUSHING. PROVIDE REMOVABLE BLANK INSERTS FOR UNUSED PORTS FOR USE BY FUTURE OWNER PROVIDED CCTV CAMERAS.	
8	WAP	INFORMATION OUTLET, CEILING MOUNT, 4—PORT, COVERPLATE AS INDICATED ON DRAWINGS, INTENDED TO PROVIDE CONNECTIVITY FOR FUTURE WIRELESS ACCESS POINT. REFER TO INFORMATION OUTLET SCHEDULE ON TN500.	
		INSTALL INFORMATION OUTLET IN A 4" SQUARE BACKBOX WITH A SINGLE GANG PLASTER RING, MOUNT TO CLOSEST STRUCTURAL ELEMENT (EX. COLUMN). INSTALL A DELUXE CORD GRIP FOR STRAIN RELIEF ON UTP CABLE. PROVIDE 20' COIL OF UTP CABLE AT WIRELESS OUTLET LOCATION. PROVIDE REMOVABLE BLANK INSERTS	
9	<u> </u>	FOR UNUSED PORTS JUNCTION BOX. PROVIDE 4" SQUARE BACKBOX WITH A SINGLE GANG PLASTER RING. INSTALL A 1" CONDUIT TO ABOVE ACCESSIBLE CEILING.	
10	НН	HAND HOLE. REFER TO 2/TN302 FOR EXTERIOR HAND HOLE DETAIL, REFER TO SPECIFICATION SECTION 27 05 33.	*
11	ER 1	TELECOMMUNICATIONS ENTRANCE ROOM, REFER TO PLANS FOR LOCATIONS AND LAYOUT.	
12	EF #	ENTRANCE FACILITY, SEE PLANS FOR LOCATIONS AND LAYOUT.	
13	MCR #	MAIN COMPUTER ROOM, SEE PLANS FOR LOCATIONS AND LAYOUT.	
14	TR	HORIZONTAL CROSS-CONNECT, SEE PLANS FOR LOCATIONS AND LAYOUT.	
15	TTB	TELECOMMUNICATIONS TERMINAL BOARD, 4' X 8' X 3/4" A-C GRADE FIRE-RATED PLYWOOD. EXPOSED SIDE SHALL BE SMOOTH. MOUNT VERTICALLY WITH TOP OF	
16		PLYWOOD AT 8'6" A.F.F. CABLE TRAY, WRE MESH TYPE, MATTE BLACK FINISH, 4" LOADING DEPTH, 12" WIDTH, COMPLETE WITH ALL FITTINGS AND MOUNTING HARDWARE. PROVIDE	*
	\17	TRAPÈZE SUPPORT WITH PLASTIC RETAINER. CUTTING OF THE MESH CABLE TRAY SHALL BE DONE WITH OFFSET BOLT CUTTERS ONLY. 10' MAXIMUM SUPPORT SPAN. EITHER SPLICE WASHERS OR TERMINAL GROUND SUPPORT AND JUMPER WIRE SHALL	
		BE USED TO ATTAIN GROUNDING CONTINUITY THROUGHOUT. Z—BRACKETS SHALL BE USED FOR WALL MOUNTED APPLICATIONS. REFER TO MANUFACTURERS INSTALLATION INSTRUCTIONS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.	*
17	$\frac{\langle CT \rangle}{2}$	CABLE TRAY, WIRE MESH TYPE, MATTE BLACK FINISH, 4" LOADING DEPTH, 18" WIDTH, COMPLETE WITH ALL FITTINGS AND MOUNTING HARDWARE. PROVIDE TRAPEZE SUPPORT WITH PLASTIC RETAINER. CUTTING OF THE MESH CABLE TRAY SHALL BE DONE WITH OFFSET BOLT CUTTERS ONLY. 10' MAXIMUM SUPPORT SPAN.	•
		EITHER SPLICE WASHERS OR TERMINAL GROUND SUPPORT AND JUMPER WIRE SHALL BE USED TO ATTAIN GROUNDING CONTINUITY THROUGHOUT. Z-BRACKETS SHALL BE USED FOR WALL MOUNTED APPLICATIONS. REFER TO MANUFACTURERS INSTALLATION INSTRUCTIONS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.	
18	(LR)	LADDER RACK, 18" W TUBULAR STEEL CONSTRUCTION, RUST RESISTANT ENAMEL FINISH, REMOVE SHARP BURRS FROM LADDER RACK AND REPAINT ALL AREAS THAT	
19	GND	HAVE BEEN FIELD MODIFIED, CUT OR EXPOSED. U.L. LISTED. WALL-MOUNT GROUND BAR. 4" H X 12" L X 1/4" D COPPER, ELECTRICALLY ISOLATED BY INSULATORS INTEGRAL TO MOUNTING BRACKETS. PROVIDE UNIT	
	1	CONFIGURED WITH SIXTEEN (16) SETS OF 5/16" HOLES SPACED 5/8" ON CENTER TO ACCOMMODATE "A" SPACED TWO—HOLE COMPRESSION LUGS AND THREE (3) SETS OF 7/16" HOLES SPACED 1" ON CENTER TO ACCOMMODATE "C" SPACED	
<u> </u>		TWO-HOLE COMPRESSION LUGS. ANSI/EIA/TIA-607 AND BICSI COMPLIANT. UL LISTED. REFER TO 3/TN301 FOR ADDITIONAL INFORMATION.	
20	EK 1	EQUIPMENT RACK, 84" HIGH, STANDARD 19" MOUNTING SPACE, 4" WIDE x 6" DEEP UPRIGHTS FEATURING PASS—THRU HOLES ON FRONT AND SIDES FOR CABLE MANAGEMENT PROVIDE TWO PER RACK, MODULAR D—RINGS ON FRONT OF VERTICAL ORGANIZERS, METAL HINGED DOORS PROVIDE TWO PER RACK, TOP CENTER	
		WATERFALL, TOP CHANNEL PATHWAY FOR LADDER RACK, DURABLE BLACK POWDER COAT FINISH, MEETS EIA-310-E REQUIREMENT, PROVIDES (45) 1.75" MOUNTING SPACES.	
21	MPP 1	MODULAR PATCH PANEL, 48 MODULAR RJ-45 TERMINATIONS, MOUNTS DIRECTLY TO EIA/TIA STANDARD 19" RELAY RACK, PORT IDENTIFICATION NUMBERS, PROVIDED WITH COLOR CODING AND LABEL HOLDER KITS, U.L. LISTED. REQUIRES (2) 1.75"	
22	(VPP)	WOUNTING SPACES. VOICE PATCH PANEL, 110—TYPE 300 PAIR, PROVIDE WITH MOUNTING BLOCKS, CONNECTING BLOCKS, HORIZONTAL JUMPER TROUGHS, DUCT ASSEMBLIES,	
23	/FDC	HARDWARE, LABEL HOLDERS, AND BLANK INSERTS, SEE SPECIFICATIONS. ALSO PROVIDE WITH 110—TYPE PATCH PANEL SYSTEM BACKBOARD. OPTICAL FIBER DISTRIBUTION CABINET, HIGH DENSITY, MINIMUM 72 FIBER CAPACITY,	
	1	PROVIDE WITH CLAMP AND GROUNDING KIT, COUPLING PANELS, ST CONNECTORS, COUPLINGS AND JUMPERS. REQUIRES (4) 1.75" MOUNTING SPACES. WALL MOUNT FIRED DISTRIBUTION CARDINET HIGH DENSITY MINIMUM 48 FIRED.	*
24	FDC 2	WALL MOUNT FIBER DISTRIBUTION CABINET. HIGH DENSITY, MINIMUM 48 FIBER CAPACITY, PROVIDE WITH CLAMP AND GROUNDING KIT, COUPLING PANELS, ST CONNECTORS, COUPLINGS AND JUMPERS.	-
25	FDC 3	OPTICAL FIBER DISTRIBUTION CABINET, COMBINATION SHELF, 24 FIBER CAPACITY, SLIDE OUT RAILS TO FACILITATE FRONT ACCESS, JUMPER TROUGHS IN CONNECTOR PANELS TO REDUCE MOUNTING SPACE, PROVIDE WITH CLAMP AND GROUNDING KIT, COUPLING PANELS, ST CONNECTORS, COUPLINGS AND JUMPERS. REQUIRES (2) 1.75" MOUNTING SPACES.	*
26	FO TX	FIBER OPTIC TRANSCEIVER, MULTI-MODE FIBER OPTIC ST TO RJ45 COPPER TRANSCEIVER - FULL DUPLEX, HARDENED, TEMPERATURE RANGE - 10° TO 50° C.	*
27	CAB 2	SERVER CABINET, 78.7" HIGH, 23.8" WIDE, 42.1" DEEP. STATIC LOAD CAPACITY 2500 LBS. REMOVABLE TAIL—BARS, DUAL REAR DOORS WITH SINGLE LATCH MECHANISM, REMOVABLE FRONT AND REAR DOORS, REAR ROTATING CASTERS,	*
		LEVELING FEET.	

		TECHNOLOGY MATERIAL LIST (CONTINUE	ED)
В	CAB 4	WALL MOUNTED ENCLOSED CABINET, 36" H x 21"W x 36"D, DOOR MOUNTED ACRYLIC SMOKE TINTED WINDOW, FRONT AND REAR SECTION KEYED SEPARATELY AND ALIKE. LOUVERED SIDES, 19" PANEL MOUNTING, UNIVERSAL MOUNTING RAILS, (4) KNOCKOUTS IN TOP AND BOTTOM, TWO—HINGE DESIGN FOR FRONT=TO=REAR ACCESS, 250LB LOAD CAPACITY. PROVIDES 19 1.75" MOUNTING SPACES.	*
9	WM 1	HORIZONTAL WIRE MANAGEMENT, 3" X 3" RIGID FRONT FINGERS WITH FLEXIBLE RETENTION TABS, 2" X 5" FLEXIBLE REAR FINGERS. REMOVABLE FRONT COVER HINGES 180 DEGREES UP OR DOWN. INTEGRAL BEND RADIUS CONTROL. PASS THROUGH HOLES ALLOW FRONT TO REAR CABLING. REQUIRES (2) 1.75" MOUNTING SPACES.	•
0	(WM) 2	HORIZONTAL WIRE MANAGEMENT, 1.75" X 3" RIGID FRONT FINGERS WITH FLEXIBLE RETENTION TABS, 1.75" X 5" FLEXIBLE REAR FINGERS. REMOVABLE FRONT COVER HINGES 180 DEGREES UP OR DOWN. INTEGRAL BEND RADIUS CONTROL. PASS THROUGH HOLES ALLOW FRONT TO REAR CABLING. REQUIRES (1) 1.75" MOUNTING SPACES.	•
1	PS 1	POWER STRIP, HORIZONTALLY MOUNTS IN A STANDARD EIA/TIA 19" RACK, (8) REAR RECEPTACLES, 125VAC/60Hz, PROVIDE WITH 10"-0" CORD., INTERNAL CIRCUIT BREAKER, U.L. LISTED. REQUIRES (1) 1.75" MOUNTING SPACE.	
2	UPS 2	UNINTERRUPTIBLE POWER SUPPLY RACK MOUNTABLE. 7200W/8000VA, 200-240 INPUT VOLTAGE, 120V/208V OUTPUT, (2)NEMA L6-20R, (4)NEMA L6-30R, (1) HARD-WRE, (12) NEMA 5-20R OUTPUT CONNECTIONS. SERIAL PORT, DRY CONTACTS, LCD CONTROL PANEL.	*
3	CPW 1	FIRE STOPPING PATHWAYS. DESIGNED FOR NEW OR EXISTING CABLE INSTALLATIONS UP TO 9" THICK WALLS OR FLOORS. CAN BE GANGED FOR ADDITIONAL CAPACITY. PATHWAY KITS INCLUDE PATHWAY, WALL PLATES, GASKETS, LABELS, REQUIRED SET SCREWS AND ALLEN KEY. THE TWO GANG KIT IS DESIGNED TO ALLOW TWO (2) SERIES 33 PATHWAYS TO BE INSTALLED IN A 3" X 6" OPENING. INSTALLS IN FINISHED WALLS.	•
4	(LP)	CABLE PROTECTOR PANEL, 100—PAIR SURGE PROTECTION MODULE, 710 TYPE INPUT TERMINATIONS AND 110—TYPE OUTPUT TERMINATIONS, PROVIDE WITH PLASTIC HOUSING. POPULATE WITH SOLID STATE PROTECTOR UNITS. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION. PROVIDE QUANTITY AS REQUIRED TO PROTECT ALL INCOMING COPPER CABLING.	*
5	LP 2	COAXIAL CABLE LIGHTNING PROTECTION, FLANGE MOUNT SURGE PROTECTION MODULE, 4—900MHz FREQUENCY RANGE, VSWR: < 1.2:1 (4—900MHz), <0.2 dB INSERTION LOSS. SURGE: 50kA IEC 31000-4-5 8/20µs WAVEFORM 500 J. TURN-ON: 600VDC; TURN-ON TIME: 2.5ns FOR 2kV/ns. RF POWER: 100W HF, 100W VHF, 25W UHF. PROTECTED SIDE CONNECTOR: F FEMALE, SURGE SIDE CONNECTOR: F FEMALE. PROVIDE WITH METAL HOUSING. PROVIDE QUANTITY AS REQUIRED TO PROTECT ALL INCOMING COAXIAL CABLING.	*
5	SEC WS	EXISTING SOFTWARE HOUSE SERIES C-CORE 9000 PLATFORM SECURITY MANAGEMENT SYSTEM WORKSTATION.	
7	\(\sum_{VB} \)	EXISTING SOFTWARE HOUSE SERIES C-CORE 9000 PLATFORM SECURITY MANAGEMENT SYSTEM VIDEO BADGING WORKSTATION.	
3	SMS SRV	EXISTING SOFTWARE HOUSE SERIES C-CORE 9000 PLATFORM SECURITY MANAGEMENT SYSTEM SERVER.	
•	SEC	ACCESS CONTROL SECURITY MANAGEMENT SYSTEM CONTROLLER. SUPPORTS UP TO 16 DOORS AND 128 ALARM POINTS. PROVIDE 128MB OF MEMORY AND LAN/INTERNET CONNECTION. PROVIDE QUANTITY OF PANELS AS REQUIRED TO SERVE DOORS AND ALARM CONTACTS.	•
)	ADA 1	ADA DOOR SEQUENCER. SEQUENCES DOOR RELEASE BETWEEN CARD READERS AND ADA RELEASE EQUIPMENT. MICROPROCESSOR CONTROL FOR RELIABLE TIMING FUNCTIONS. PROGRAMMABLE DOOR CONTROL CONFIGURATIONS INCLUDING MAGNETIC LOCKS, ELECTRIC STRIKES AND PANIC BARS. DUAL STAGE CONTROL FOR VESTIBULE DOOR OPERATOR OUTPUTS.	•
1	SEC SW	POE ETHERNET SWITCH FOR SECURITY NETWORK. 24 OR 48 PORT SWITCH.	*
2	POE	HARDENED POE ETHERNET SWITCH - FIVE COPPER PORTS, ONE FIBER OPTIC PORT. 10/100 PORTS, -25°C TO 60°C TEMPERATURE RATING, DIN-CASE OR PANEL MOUNT, LINK LOSS, POE. PROVIDE POWER SUPPLY AS REQUIRED.	*
3	EDG	1 STAR EDGE CONTROLLER 2 PORT CONTROLLER TO BE INSTALLED AT GATE LOCATIONS. PROVIDE WITH POE MODULE.	1 STAR ESTAR 002-MB WITH POE MODULE
1	™ D	MOTION DETECTOR, WALL MOUNTED, DUAL TECHNOLOGY MICROWAVE/PIR. FORM C, 35'x30' RANGE, AUTOMATIC TEMPERATURE COMPENSATION. INSTALL ACCORDING TO MANUFACTURES SPECIFICATIONS.	ROKONET RK-8250T TO MATCH EXISTING
5	⊠ ^C	MOTION DETECTOR, CEILING MOUNTED, DUAL TECHNOLOGY MICROWAVE/PIR. FORM C, 25' RADIUS RANGE. INSTALL ACCORDING TO MANUFACTURES SPECIFICATIONS.	BOSCH DS-9320 TO MATCH EXISTING
6	₩ P	WALL MOUNTED DURESS BUTTON, SPDT, 12VDC SWTCH WITH LATCHING LED LIGHT INDICATING SWTCH ACTIVATION, LED TO PROVIDE GREEN LIGHT GLOW FOR VISIBILITY OF SWTCH, SMALL FORM FACTOR WHITE ABS PLASTIC HOUSING (2"W X 3"H X 1"D) CONTAINING ELECTRONICS AND MAGNETIC CONTACT. SWTCH SHALL ALARM AT APPROXIMATELY 1" MOVEMENT OF ARM (APPROXIMATELY 2D DEGREES) FROM RESTING POSITION, SWTCH SHALL BE RESET ONLY FROM THE SECURITY MANAGEMENT WORKSTATION. EACH DURESS BUTTON SHALL BE WIRED TO THE NEAREST ACCESS CONTROL SYSTEM CONTROLLER AS A SYSTEM INPUT. EACH DURESS SWITCH SHALL INITIATE A BREAKOUT ALARM ON THE SECURITY MANAGEMENT WORKSTATION INDICATING UNIQUE SWITCH LOCATION.	STI SS-2479 WITH STI-6545 COVER TO MATCH EXISTING.
7	₽P	WIRELESS DURESS BUTTON, SPDT, 12VDC SWTCH WITH LATCHING LED LIGHT INDICATING SWTCH ACTIVATION, LED TO PROVIDE GREEN LIGHT GLOW FOR VISIBILITY OF SWTCH, SMALL FORM FACTOR WHITE ABS PLASTIC HOUSING (2"W X 3"H X 1"D) CONTAINING ELECTRONICS AND MAGNETIC CONTACT. SWTCH SHALL ALARM AT APPROXIMATELY 1" MOVEMENT OF ARM (APPROXIMATELY 20 DEGREES) FROM RESTING POSITION, SWTCH SHALL BE RESET ONLY FROM THE SECURITY MANAGEMENT WORKSTATION. EACH DURESS BUTTON SHALL BE WIRED TO THE NEAREST ACCESS CONTROL SYSTEM CONTROLLER AS A SYSTEM INPUT. EACH DURESS SWITCH SHALL INITIATE A BREAKOUT ALARM ON THE SECURITY MANAGEMENT WORKSTATION INDICATING UNIQUE SWITCH LOCATION.	
В	CSS	ACCESS CONTROL SECURITY SYSTEM, SYMBOL INDICATES THAT DOOR HAS SECURITY FUNCTIONALITY, REFER TO ACCESS CONTROL SYSTEM DOOR SCHEDULE FOR COMPLETE REQUIREMENTS FOR EACH DOOR. REFER TO SPECIFICATION SECTION 28 13 00 FOR COMPLETE INFORMATION.	•
9	REX	REQUEST TO EXIT MOTION SENSOR. DOOR POSITION INDICATOR SWITCH. INTEGRAL PART OF ACCESS CONTROLSYSTEM,	. GE SECURITY
1	B	1/4" DIAMETER, MAGNETIC, STANDARD GAP, RECESSED IN DOOR FRAME. COORDINATE INSTALLATION WITH GENERAL CONTRACTOR AND DOOR SUPPLIER. REFER TO SPECIFICATION SECTION 28 13 11. SECURITY BELL, 12VAC, 10VA, 100DB AT 1M, 300 TO 12KHZ FREQUENCY.	1055 SERIES OR APPROVED EQUAL
2	□ w s	CARD READER, PROVIDED AS INTEGRAL PART OF SECURITY MANAGEMENT SYSTEM, REFER TO ACCESS CONTROL SYSTEM DOOR SCHEDULE FOR COMPLETE INFORMATION, CARD READERS SHOWN ON PLANS TO IDENTIFY INTENDED MOUNTING LOCATION, REFER TO SPECIFICATION SECTION 28 13 11 FOR COMPLETE INFORMATION. INSTALL INFORMATION OUTLET IN A 4" SQUARE BACKBOX WITH A SINGLE GANG PLASTER RING. INSTALL A 1" EMT CONDUIT TO THE NEAREST CABLE TRAY OR	•
3	\Box_{sk}^{w}	CARD READER AND KEYPAD, PROVIDED AS INTEGRAL PART OF SECURITY MANAGEMENT SYSTEM, REFER TO ACCESS CONTROL SYSTEM DOOR SCHEDULE FOR COMPLETE INFORMATION, CARD READERS SHOWN ON PLANS TO IDENTIFY INTENDED MOUNTING LOCATION, REFER TO SPECIFICATION SECTION 28 13 11 FOR COMPLETE INFORMATION. INSTALL INFORMATION OUTLET IN A 4" SQUARE BACKBOX WITH A SINGLE GANG PLASTER RING. INSTALL A 1" EMT CONDUIT TO THE NEAREST CABLE TRAY OR LADDER RACK PROVIDE RE	*
4	\Box_s^{M}	MULLION MOUNTED CARD READER, PROVIDED AS INTEGRAL PART OF SECURITY MANAGEMENT SYSTEM, REFER TO ACCESS CONTROL SYSTEM DOOR SCHEDULE FOR COMPLETE INFORMATION, CARD READERS SHOWN ON PLANS TO IDENTIFY INTENDED MOUNTING LOCATION, REFER TO SPECIFICATION SECTION 28 13 11 FOR COMPLETE INFORMATION.	*
5	\Box_{s}^{P}	PEDESTAL MOUNTED CARD READER, PROVIDED AS INTEGRAL PART OF SECURITY MANAGEMENT SYSTEM, REFER TO ACCESS CONTROL SYSTEM DOOR SCHEDULE FOR COMPLETE INFORMATION, CARD READERS SHOWN ON PLANS TO IDENTIFY INTENDED MOUNTING LOCATION, REFER TO SPECIFICATION SECTION 28 13 11 FOR COMPLETE INFORMATION.	•
6	⊟ _{SI}	INTERCOM MASTER STATION. PUSH TO TALK; HANDS FREE AT REMOTE, VOICE VOLUME CONTROL, SUB CALL IN WITH TONE, PRESS BUTTON TO TRANSMIT, RELEASE TO LISTEN, OUTPUT 350MW.	•
7	B	INTERCOM STATION. FLUSH MOUNTED, VANDAL RESISTANT, OUTDOOR RATED, WEATHER RESISTANT, 12 GAUGE STAINLESS STEEL MECHANICAL CALL BUTTON, MOISTURE AND PUNCTURE RESISTANT SPEAKER, 3—LAYER STEAL BAFFLE TO PROTECT SPEAKER FROM TAMPERING, HAND FREE COMMUNICATION WHEN MASTER ANSWERS.	*
В		IP INTERCOM STATION — GATE LOCATIONS VANDAL RESISTANT INTERCOM STATION.	•

59	S #	SPEAKER, RECESS CEILING MOUNT ASSEMBLY, CONSISTING OF AN 8" LOUDSPEAKER, 10 OZ. CERAMIC MAGNET. 47-20KHZ FREQUENCY RANGE, 15 WATTS RMS RATING 120 DEGREE COVERAGE ANGLE 70V TRANSFORMER TAPS 5W 2W 1W	•
		RMS RATING, 120 DEGREE COVERAGE ANGLE, 70V TRANSFORMER TAPS 5W, 2W, 1W, 0.5W, 0.25W INCLUDES SPEAKER BACKBOX, BAFFLE AND WHITE STEEL GRILL. PROVIDE A SPEAKER SUPPORT BRIDGE FOR LAY—IN CEILINGS. # SUBSCRIPT INDICATES PAGING ZONE.	
60	PS	WALL MOUNTED NETWORKED PAGING STATION. PUSH TO TALK BUTTON WITH STATUS INDICATION, 999 USER—CONFIGUARABLE PAGE CODES, 4 PRIORITY LEVELS AND 4 EMERGENCY PRIORITY LEVELS, LOCAL DIGITAL SIGNAL PROCESSING, EMBEDDED DSB AND ON BOARD MEMORY, LOCAL STORAGE, BUILT IN STORE AND FORWARD FUNCTIONALITY, COBRANET AUDIO/CONTROL, BACKLIT LCD DISPLAY, NOISE CANCELING HANDHELD MICROPHONE. POWER OVER ETHERNET VIA SINGLE CATS CABLE AND RJ—45 CONNECTOR OR AUX 12VDC POWER CONNECTOR.	*
61	<u>©</u>	SPEAKER, EXTERIOR RATED SURFACE MOUNTED. 50W CONTINUOUS POWER, 104HZ - 17KHZ FREQUENCY RESPONSE, 102dB SPL • 50W SENSITIVITY, 100 DEGREE CONICAL DISPERSION. 4.9 LBS. 70V OPERATION, MULTIPLE TAP VALUES, WEATHER PROTECTIVE BOOT. CONTRACTOR SHALL PROVIDE AND INSTALL ALL REQUIRED MOUNTING HARDWARE	*
62	ELD 1	SURFACE MOUNTABLE END OF LINE NETWORK SAFETY DEVICE. LINE MONITORING, DETECTS INAUDIBLE SIGNAL FROM AMP MODULE, REPORTS SHORTS OR OPENS IN THE SPEAKER LINE TO THE NETWORK, POWER AND DATA OVER SINGLE ETHERNET CABLE. STATUS LED. REMOVABLE TERMINAL BLOCK CONNECTOR.	•
63	EPS	WALL MOUNTED NETWORKED EMERGENCY PAGING STATION. CERTIFIED FOR USE IN AN EN 54–16 COMPLIANT LIFE SAFETY SYSTEM. PUSH TO TALK BUTTON WITH STATUS INDICATION, 999 USER—CONFIGUARABLE PAGE CODES, 4 PRIORITY LEVELS AND 4 EMERGENCY PRIORITY LEVELS, LOCAL DIGITAL SIGNAL PROCESSING, EMBEDDED DSP AND ON BOARD MEMORY, LOCAL STORAGE, BUILT IN STORE AND FORWARD FUNCTIONALITY, COBRANET AUDIO/CONTROL, BACKLIT LCD DISPLAY, NOISE CANCELING HANDHELD MICROPHONE. POWER OVER ETHERNET VIA SINGLE CATS CABLE AND RJ 45 CONNECTOR OR AUX 12VDC POWER CONNECTOR.	*
64	AMP 1	RACK MOUNTED NETWORK MULTI-CHANNEL AMPLIFIER. AMPLIFICATION MODULES WITH SOFTWARE CONFIGURABLE POWER LEVELS/LOAD OPTIONS. 8 AMPLIFICATION MODULES PER FRAME WITH 100 TO 600 WATTS PER MODULE (MAXIMUM OF 2400W PER CHASSIS). 70V OR 100V DIRECT DRIVE CAPABILITY, OR LOW IMPENDENCE 4 OHM OR 8 OHM OPERATION. FAILOVER CAPABILITY BETWEEN CHANNELS AND AMPLIFIERS. LOCAL NON VOLATILE MEMORY. LED INDICATION, SOFTWARE MONITORING, SOFTWARE CONFIGURABLE SIGNAL PROCESSING, COBRANET AUDIO/CONTROL. DUAL ETHERNET PORTS FOR REDUNDANCY, TERMINAL BLOCK CONNECTORS FOR SPEAKER WIRING. 3RU RACK MOUNTABLE. 120VAC. CONTRACTOR SHALL PROVIDE (1) POWER AMP MODULE PER ZONE.	*
65	AIE 1	RACK MOUNT NETWORKED AUDIO INPUT EXPANSION DEVISE. SIX AUDIO INPUT CHANNELS. 4 — DUAL RCA CONNECTORS PLUS TERMINATION BLOCK CONNECTORS FOR LINE LEVEL INPUTS. 4—CONTROL INPUTS AND 4—CONTROL OUTPUTS. 2—MICROPHONE / LINE INPUTS WITH PHANTOM POWER. SOFTWARE CONFIGURABLE LOCAL AUDIO SIGNAL PROCESSING. COBRANET AUDIO/CONTROL. POWER OVER ETHERNET VIA CATS RJ—45 JACK. 1 RU RACK MOUNTABLE.	*
66	SW 1	RACK MOUNT POE MANAGED ETHERNET SWITCH. 4 - 10/100 BASE TX 802.3AF (POE) COMPLIANT ETHERNET PORTS. MODULAR FRAME CAPABLE OF 15 ADDITIONAL ETHERNET PORTS INCLUDING 10BASEFL/100BASE FX/1000BASEX FIBER AND 10/100/ 1000BASETX COPPER PORT COMBINATIONS. SUPPORTS ST, MTRJ, LC, SC, FIBER CONNECTORS.SSH/SSL 128-BIT ENCRYPTION. 48VDC POE POWER SUPPLY, 120VAC UNIT POWER SUPPLY. 1RU RACK MOUNTABLE.	*
67	SW 2	RACK MOUNT POE MANAGED ETHERNET SWITCH. 4 - 10/100 BASE TX 802.3AF (POE) COMPLIANT ETHERNET PORTS. MODULAR FRAME CAPABLE OF 15 ADDITIONAL ETHERNET PORTS INCLUDING 10BASEFL/100BASE FX/1000BASEX FIBER AND 10/100/ 1000BASETX COPPER PORT COMBINATIONS. SUPPORTS ST, MTRJ, LC, SC, FIBER CONNECTORS.SSH/SSL 128-BIT ENCRYPTION. 48VDC POE POWER SUPPLY, 120VAC UNIT POWER SUPPLY. 1RU RACK MOUNTABLE. PROVIDE WITH MULTIMODE FIBER MODULE TO SUPPORT BACKBONE FIBER CONNECTION.	*
68	NMS 1	RACK MOUNT MESSAGE SERVER. RECORDED MESSAGE STORAGE AND PLAYBACK, EVENT SCHEDULING, STORAGE OF LOGGED SYSTEM DATA, VOIP PAGING INTERFACE, COBRANET AUDIO/CONTROL, STATUS LED, ETHERNET PORTS FOR TCP/IP CONTROL, COBRANET AND VOIP, 1RU RACK MOUNTABLE, 120VAC	*
69	UPS 1	UNINTERRUPTIBLE POWER SUPPLY. AUTOMATIC VOLTAGE REGULATION, INTELLIGENT BATTERY MANAGEMENT, POWER CONDITIONING, AND NETWORK MANAGEABLE AUDIO ALARMS. 2700 WATTS / 3000 VA, 120V NOMINAL OUTPUT VOLTAGE. (6) — NEMA 5—15R, (2) — NEMA 5—20R OUTPUT CONNECTIONS. 120V INPUT, NEMA L5—30P INPUT CONNECTIONS. 40A INPUT BREAKER. MAINTENANCE FREE LEAD—ACID 3 HOUR BATTERY. CONTRACTOR SHALL SMART SLOT NETWORK INTERFACE CARD (#AP9630). RACK MOUNT INCLUDED. REQUIRED 2RU SPACES.	*
70	VOIP	ANALOG TELEPHONE TO VOIP GATEWAY. CONNECTS UP TO (2) ANALOG POTS LINES, SIP COMPLIANT.	*
71	POE	POWER OVER ETHERNET (POE) IN-LINE POWER INJECTOR. RACK MOUNTABLE, PROVIDES 24 PORTS OF POE AT 15.4 WATTS EACH. PROVIDE WITH 48VDC, 1250 WATT POWER RECTIFIERS AND RACK MOUNT KIT, PROVIDE QUANTITY AS REQUIRED TO SUPPLY ALL THE REQUIRED PATCH PANELS.	*
72	TVA 1	BROADBAND DISTRIBUTION AMPLIFIER, 47—750 MHZ FREQUENCY RANGE, +44 dBmV OUTPUT LEVEL, POWER DOUBLING CAPABILITY, ALUMINUM CHASSIS, STANDARD EIA/TIA 19" RACK MOUNTABLE, BUILT—IN VARIABLE GAIN AND SLOPE CONTROLS WITH 15 dB GAIN CONTROL RANGE AND 10 dB SLOPE CONTROL RANGE, INPUT AND OUTPUT TEST PORTS, PROVIDES TEMPERATURE STABILITY, LINE TRANSIENT PROTECTION, FRONT PANEL ACCESS TO ALL CONTROLS. SEE SPECIFICATIONS. REQUIRES (1) 1.75" MOUNTING SPACE.	
73	TVT 4	4-WAY DIRECTIONAL COUPLER/TAP, 5-1000 MHz FREQENCY RANGE, RF SHIELDING, DIE CAST HOUSING. ISOLATION OUTPUTS AND THRU-LINE LOSSES WILL VARY, PROVIDE PER CONTRACTOR REQUIREMENTS/DESIGN.	•
74	CPP 1	CATV PATCH PANEL, 48 PORT PATCH PANEL. MOUNT PANEL ON WALL WITH SWING-EZ WALL MOUNT RACK. (SIEMON # SBH-2) INSERT FLAT 'F' CONNECTOR MODULES INTO PATCH PANEL AND PROVIDE ICONS (SIEMON # CT-ICON-07). FILL ALL EMPTY SPACES ON PANEL WITH BLANKS (SIEMON # MX-BL-01).	SIEMON MX-F-FA-01 MX-PNL-48
75	CAB 1	BROADCAST EQUIPMENT RACK. 83 1/8" H x 22" W x 36" D; EIA COMPLIANT 19" MOUNTING SPACE. RACK SHALL COME EQUIPPED WITH TWO PAIRS OF 11-GAUGE STEEL RACKRAIL WITH TAPPED 10-32 MOUNTING HOLES IN UNIVERSAL EIA SPACING. RACKRAIL SHALL BE FINISHED IN BLACK E-COAT WITH NUMBERED RACK SPACES. SIDES OF RACK SHALL INCLUDE 16 PREINSTALLED HORIZONTAL LACING BARS. GROUNDING AND BONDING STUD SHALL BE 1/4 -20, THREADED AT BASE OF ENCLOSURE. ENCLOSURE SHALL SATISFY 2007 AND 2010 CBC; 2006, 2009 AND 2012 IBC; ASCE 7-05, ASCE 7-10 AND THE 2006 AND 2009 EDITIONS OF NFPA 5000 FOR USE IN AREAS OF HIGH SEISMICITY.	•
76	SRB 1	SEISMIC RISER BASE. SEISMIC CERTIFIED RISER BASE SHALL SATISFY 2007 AND 2010 CBC; 2006, 2009 AND 2012 IBC; ASCE 7-05, ASCE 7-10 AND THE 2006 AND 2009 EDITIONS OF NFPA 5000 FOR USE IN AREAS OF HIGH SEISMICITY. MUST BE USED IN CONJUNCTION WITH FB/1.	*
77	CAB 3	A/V EQUIPMENT HALF RACK, 19" EIA RACK SPACING, 18 GAUGE VENTED SIDES, 14 GAUGE STEEL OUTSIDE RACK RAILS, BLACK BAKED ENAMEL, PROVIDE WITH SHELVES AS REQUIRED FOR ALL EQUIPMENT NOT RACK—MOUNTABLE. RACK HEIGHT SHALL BE 35", RACK SHALL HAVE A MINIMUM OF 6 RACK UNITS OF SPARE MOUNTING SPACE. REFER TO FLOOR PLAN FOR LOCATIONS.	*
78	FB 1	SEISMIC FLOOR ANCHOR BRACKET. ANCHORS SRB/1 TO FLOOR PROVIDING AN IP RATING OF 1.5.	*
79	PDU 1	POWER DISTRIBUTION UNIT, VERTICALLY MOUNTS IN REAR OF A STANDARD OI+T CABINET. INPUT SOURCE, 208V 3 PHASE, INPUT CONNECTION, NEMA L21-20P. OUTPUT VOLTAGE. 120V, 208V OUTPUT CONNECTION (21) NEMA 5-20R RECEPTACLES PER PHASE AND (6) NEMA L6-20R RECEPTACLES. TOTAL LOAD CAPACITY FOR PDU IS 5700 VA.	*
80	MLC	WALL PLATE. TWO GANG SIX BUTTON CONTROL PLATE WITH WITH INTEGRATED VOLUME CONTROL, IR, AND UNIDIRECTIONAL RS-232 CONTROL. INCLUDES ONE (1) VOLUME KNOB, AND SIX CONFIGURABLE BUTTONS FOR CONTROL OF DISPLAY, POWER, INPUT SELECTION OR ANY OTHER IR/RS-232 COMMAND. WHERE NOTED ON FLOOR PLANS PROVIDE WITH SMB 102 TWO GANG SURFACE MOUNT BOX SUITABLE FOR EXTERNAL WALL MOUNTING AND TABLE TOP APPLICATIONS.	*
81	VID	WALL PLATE. TWO GANG DECORA STYLE UNIVERSAL TWISTED PAIR TRANSMITTER. CONNECTIVITY INCLUDES ONE (1) HD15 RGBHV WITH 3.5MM STEREO FEMALE, ONE (1) YPBPR COMPONENT VIDEO ON RCA'S, ONE (1) S-VIDEO, AND STEREO RCA'S. AUTOMATICALLY SWITCHES TO THE HIGHEST QUALITY ACTIVE VIDEO INPUT BUT PROVIDES A CONTACT CLOSURE FOR REMOTE SELECTION OF AV INPUTS.	*
82	HDMI	WALL PLATE. SINGLE GANG DECORA STYLE WALL PLATE UNIVERSAL TWISTED PAIR TRANSMITTER. CONNECTIVITY INCLUDES ONE (1) HDMI, STEREO RCA'S, AND ONE (1) RS-232 RX/TX PASS THROUGH.	*
83	HDMI	UNIVERSAL TWISTED PAR RECIEVER, ACCEPTS DIGITAL AND ANALOG VIDEO FORMATS, AUDIO, AND CONTROL SIGNALS OVER CATEGORY CABLES. OUTPUTS INCLUDE RGB ON HD15, YPBPR COMPONENT VIDEO ON THREE (3) BNC'S, S-VIDEO, COMPOSITE VIDEO BNC, HDMI, AND CAPTIVE SCREW CONNECTORS FOR BALANCED OR UNBALANCED DUAL MONO AUDIO AND RS-232. MEETS UL 2043 PLENUM RATING.	•
84	XTP 16	16X16 DIGITAL MATRIX SWITCHER. EIGHT (8) SLOT FRAME, ETHERNET CONTROL PORT, RS-232 CONTROL PORT, FRONT PANEL CONTROLS. REQUIRES FIVE (5) 1.75" EIA/TIA RACK SPACES. PROVIDE WITH REDUNDANT POWER SUPPLIES. PROVIDE WITH INPUT AND OUTPUT CARDS AS SPECIFIED. REFER TO TN402 CONFERENCE ROOM PRESENTATION SYSTEM RISER DIAGRAM.	*
85	XTP	XTP WALLPLATE. LONG DISTANCE, FOUR (4) INPUT XTP TRANSMITTER. TRANSMITS HDMI, DIGITIZED ANALOG VIDEO, AUDIO AND ETHERNET MAX 330 FEET OVER CAT 5 CABLE. HDMI, VGA, COMPOSITE AND COMPONENT VIDEO INPUTS. DIGITAL CONVERSION OF ANALOG VIDEO FORMATS, INPUT SENSING. MOUNT IN DEEP 3—GANG BACK BOX.	*

86	TPL	7" WALL MOUNT TOUCH PANEL. TEN BACKLIT BUTTONS FOR EXPANDED CONTROL,	*
86 87	TPL 2	FULL MOTION VIDEO, ETHERNET CONTROL. 7" TABLETOP TOUCH PANEL. TEN BACKLIT BUTTONS FOR EXPANDED CONTROL, FULL MOTION VIDEO, ETHERNET CONTROL.	*
88	WPB 1	AV WALLPLATE. THREE—GANG WALLPLATE WITH 15—PIN FEMALE PASS THROUGH, FOUR (4) RCA FEMALE AUDIO CONNECTIONS, ONE (1) S—VIDEO PASS THROUGH, ONE (1) RCA VIDEO CONNECTION, AND ONE F—TYPE BARREL. OPENING FOR DECORA WALLPLATE INSERT. REQUIRES [WPB]2.	*
89	WPB ₂	HDMI WALLPLATE. DECORA WALLPLATE WITH HDMI FEMALE CONNECTOR ON A 10" PIGTAIL, 3.5mm STEREO JACK, RS-232 PASS THROUGH. REQUIRES 2 METER HDMI CABLE.	*
90	IPL 250	AV SYSTEM CONTROL PROCESSOR. THREE (3) RS-232 COMMUNICATION PORT. FOUR (4) IR PORTS, FOUR (4) RELAYS. EXTERNAL 12 VDC POWER SUPPLY.	*
91	PRO 1	CEILING MOUNTED VIDEO PROJECTOR, 3 LCD. TWN LAMP SYSTEM: 7000 ANSI LUMENS, 8000 HOUR LAMP LIFE, RS-232 BI DIRECTIONAL CONTROL, LAN CONNECTOR, VERTICAL KEYSTONE CORRECTION: +/- 5 DEGREES. 2000:1 CONTRAST RATIO. SIGNAL TYPE NTSC, PAL, SECAM, 480I, 480p, 720p, 1080I, AND 1080p. ASPECT RATIO:16:10. RESOLUTION IS WUXGA (1920 X 1200). INPUTS: (1) HD15, (1) RGBHV 5-BNC, (1) DVI-D WITH HDCP SUPPORT, (1) HDMI, (1) S-VIDEO, (1) VIDEO, (1) ADAPTER SLOT FOR HDSDI/SDI INPUT. PROVIDE WITH APPROPRIATE ZOOM LENS FOR DISTANCE TO SCREEN. PROVIDE WITH CEILING MOUNT, PROVIDE PITCH AND ROLL OR +/- 20 DEGREES AND 360 DEGREE YAW.	•
92	VPS 1	VIDEO PROJECTION SCREEN, FRONT PROJECTION, ELECTRIC, RECESSED CEILING MOUNT, 50"H x 80"V. FOR LOCATIONS WHERE THE SCREEN IS NOT BEING CONTROLLED VIA AN A/V CONTROL SYSTEM, PROVIDE WITH A MANUAL CONTROL STATION MOUNTED WHERE SHOWN ON THE DRAWINGS, PROVIDE WRING FROM THE SCREEN MOTOR TO THE CONTROL STATION.	*
93	PRO 2	AV SYTEM CONTROL PROCESSOR. SIX BUILT—IN COM PORTS, EIGHT IR/SERIAL PORTS, EIGHT I/O VERSIPORTS, EIGHT ISOLATED RELAYS AND ETHERNET FOR CONTROL. BUILT IN POWER SUPPLYS. ABILITY TO SUPPORT EXTERNAL DIVICES INCLUDING TOUCHPANELS, KEYPADS AND EXPANSION MODULES. PROGRAMMABLE FRONT CONTROL PANEL WITH LCD DISPLAY AND CONTROL PORT STATUS INDICATORS. THREE Y—BUS AND ONE Z— BUS CONTROL CARD EXPANSION SLOTS. REQUIRES TWO EIA RACKSPACES FOR MOUNTING.	*
94	AUD FLX	DIGITAL AUDIO PLATFORM WITH 24 INPUTS AND 24 OUTPUTS. FUNCTIONS AS MIXER, DSP AND ROUTER. REQUIRES TWELVE INPUT CARDS AND TWELVE OUTPUT CARDS.	*
95	MIC	HAND HELD WIRELESS MICROPHONE TRANSMITTER. RF CARRIER FREQUENCY RANGE OF 470.000 TO 865.000 MHZ, RANGE OF 300 FT. AUDIO FREQUENCY RESPONSE OF 25 HZ TO 15 KHZ. 30 mW MAXIMUM OUTPUT RF POWER. OPERATES EIGHT (8) HOURS ON ONE 9 VOLT BATTERY. REQUIRES MIC/RX.	•
96	MIC TX2	BODY PACK WRELESS MICROPHONE TRANSMITTER. RF CARRIER FREQUENCY RANGE OF 470.000 TO 865.000 MHZ, RANGE OF 300 FT. AUDIO FREQUENCY RESPONSE OF 25 HZ TO 15 KHZ. 30 mW MAXIMUM OUTPUT RF POWER. OPERATES EIGHT (8) HOURS ON ONE 9 VOLT BATTERY. REQUIRES MIC/RX.	•
97	MIC RX	WRELESS MICROPHONE RECEIVER. RF CARRIER FREQUENCY RANGE OF 470.000 TO 865.000 MHZ, RANGE OF 300 FT. AUDIO FREQUENCY RESPONSE OF 25 HZ TO 15 KHZ. 25 dB GAIN ADJUSTMENT, PHANTOM POWER PROTECTION, BALANCED AND UNBALANCED MIC AND LINE OUTPUTS. 14 — 18 VDC POWER INPUT. REQUIRES MIC/TX.	*
98	ANT	ACTIVE UHF WIRELESS DIRECTIONAL ANTENNA FOR USE WITH WIRELESS MICROPHONE ANTENNA DISTRIBUTION SYSTEM. DIPOLE ARRAY, CARDIOID RECEPTION PATTERN, 3 dB OR 10 dB SELECTABLE GAIN. PROVIDE WITH WALL BRACKET, 4" SQUARE BACK BOX WITH 1" EMT CONDUIT TO NEAREST CABLE TRAY AND NYLON BUSHING.	*
99	ADS 1	WRELESS MICROPHONE ANTENNA DISTRIBUTION SYSTEM. WIDEBAND UHF (470-952 MHZ) FOUR-WAY ACTIVE ANTENNA SPLITTER AND POWER DISTRIBUTION SYSTEM. DISTRIBUTES ONE PAIR OF ANTENNAS TO MULTIPLE RECEIVERS. COMPENSATES FOR RESULTING INSERTION LOSS. SUPPORTS FOUR WRELESS RECEIVERS. PROVIDE WITH [ANT].	•
100	DMP 64	AUDIO MATRIX MIXER. SIX (6) INPUTS, FOUR (4) OUTPUTS. DSP PROCESSING. 12 VDC EXTERNAL POWER SUPPLY	*
101	SS	PRESENTATION ROOM SPEAKER, RECESS CEILING MOUNT ASSEMBLY, CONSISTING OF AN 8" LOUDSPEAKER, 10 OZ. CERAMIC MAGNET. 47—20kHz FREQUENCY RANGE, 15 WATTS RMS RATING, 120 DEGREE COVERAGE ANGLE, 70V TRANSFORMER TAPS 5W, 2W, 1W, 0.5W, 0.25W INCLUDES SPEAKER BACKBOX, BAFFLE AND WHITE STEEL GRILL. PROVIDE A SPEAKER SUPPORT BRIDGE FOR LAY—IN CEILINGS. # SUBSCRIPT INDICATES PAGING ZONE.	*
102	S ₁	CEILING SPEAKER 8" TWO WAY CEILING SPEAKER WITH 8" BACK CAN AND 70/V TRANSFORMER WITH 70 HZ TO 20 KHZ FREQUENCY RESPONSE, 89DB SPL 1W © 1M SENSITIVITY, AND 110 DEGREE CENTRAL COVERAGE PATTERN, TRANSFORMER PROVIDES 7.5W, 15W, 30W AND 60W TAPS, PACKAGE INCLUDES TWO SPEAKERS INDICATED ON FLOOR PLANS BY TWO (S), SYMBOLS.	•
103	MPA 401	STEREO POWER AMPLIFIER. 40W CLASS D MINI 1/4 RACK WIDTH POWER AMPLIFIER, RMS OUTPUT POWER IS 40W. INPUTS INCLUDE BALANCED OR UNBALANCED STEREO ON CAPTIVE SCREW CONNECTOR. SPEAKER OUTPUTS ON 5MM CAPTIVE SCREW CONNECTOR. MEETS UL 2043 PLENUM RATING.	*
104	PS 124	POWER SUPPLY: EIGHT(8) 12VDC OUTPUTS; TOTAL OF 4.0 AMPS ACROSS ALL OUTPUTS, NO PER-PORT LIMITATION; RACK MOUNTABLE. MEETS UL2043 PLENUM RATING WITH ADAPTER KIT.	*
105	DVD 1	UNIVERSAL BLU-RAY/DVD/CD PLAYER. PLAYBACK SUPPORT OF BD-VIDEO, BD-R, BD-RE, DVD-VIDEO, DVD-AUDIO, DVD+R, DVD+RW, DVD-R, DVD-RW, SUPER AUDIO CD, AUDIO CD, CD-R, CD-RW. HDMI, COMPONENT, AND COMPOSITE VIDEO OUTPUTS. COAXIAL DIGITAL (RCA), STEREO ANALOG (RCA), 7.1 ANALOG SURROUND (RCA) AUDIO OUTPUTS. REQUIRES TWO (2) 1.75" EIA/TIA RACK SPACES.	*
106	CON C20	VIDEO CONFERENCING SYSTEM, 1 RU, 1080P, H.232/SIP, FIVE (5) HD INPUTS, ONE (1) COMPOSITE/S-VIDEO INPUT, TWO (2) MIC INPUTS, TWO (2) LINE LEVEL INPUTS, TWO (2) VIDEO OUTPUTS, THREE (3) AUDIO OUTPUTS, 1080P HD CAMERA.	*
107	MIC	TABLE TOP VIDEO CONFERENCE MICROPHONE. PRESSURE ZONE, ELECTRET CONDENSER. FREQUENCY RESPONSE FROM 80 HZ — 20 KHZ, SENSITIVITY OF —43dBV/Pa, 150 dB SPL WITH LESS THAN 3% TOTAL HARMONIC DISTORTION. COORDINATE MOUNTING LOCATION WITH FURNITURE PROVIDER.	*
108	MIC	CEILING MOUNT VIDEO CONFERENCE MICROPHONE. PRESSURE ZONE, ELECTRET CONDENSER. FREQUENCY RESPONSE FROM 80 HZ - 20 KHZ, SENSITIVITY OF -43dBV/Pa, 150 dB SPL WITH LESS THAN 3% TOTAL HARMONIC DISTORTION.	*
109	IPCP 505	AV SYSTEM CONTROL PROCESSOR. SIX RS-232 COMMUNICATION PORTS, TWO (2) RS-232/RS-422/RS-485 COMMUNICATION PORTS. EIGHT (8) IR/SERIAL PORTS, EIGHT (8) PELAYS INTERNAL POWER SURPLY	*
110	LCD 1	EIGHT (8) RELAYS. INTERNAL POWER SUPPLY. PROFESSIONAL 55" LCD MONITOR WITH DIGITAL TUNER. 1080p RESOLUTION, NTSC/ATSC TUNER, EXPANSION SLOT, DIGITAL LOOP—THROUGH. 4000:1 CONTRAST RATIO, 178" VIEWING ANGLE, 8ms RESPONSE TIME, 500cd/m² TYPICAL BRIGHTNESS, 700cd/m² MAXIMUM BRIGHTNESS. DISPLAYPORT, HDMI, AND DVI—D DIGITAL VIDEO INPUTS. VGA, RGBHV, S—VIDEO, BNC COMPOSITE ANALOG VIDEO INPUTS. RCA, 3.5MM STEREO, AND HDMI AUDIO INPUTS. RS—232, LAN AND IR EXTERNAL CONTROL. 400x400mm VESA MOUNTING. PROVIDE WITH EXTERNAL SPEAKERS.	*
111	LCD	LOW PROFILE TILTING FLAT PANEL TELEVISION MOUNT. 300LB MAX. 10° CONTINUOUS TILT, BUILT—IN LATERAL SHIFT, SAFETY SCREWS. 200x200mm TO 1113x708mm MOUNTING PATTERN.	*
112	ALS TX	ASSISTED LISTENING SYSTEM IR TRANSMITTER. CAPABLE OF BROADCASTING ON FOUR (4) MONO OR STEREO CARRIERS (2.3, 2.8, 3.3, 3.8 MHZ). THE CHANNEL SELECTION SHALL BE CAPABLE OF BEING LOCKED. MULTIPLE TRANSMITTERS SHALL BE CAPABLE OF BEING DAISY—CHAINED TOGETHER TO TRANSMIT UP TO FOUR (4) CHANNELS SIMULTANEOUSLY. THE TRANSMITTER SHALL HAVE A TIMER THAT SHUTS OFF THE CARRIERS AFTER 30 MINUTES WHEN NO AUDIO IS PRESENT AT THE TRANSMITTER. SIGNAL TO NOISE RATIO OF 60db, FREQUENCY RESPONSE OF 63 HZ—15 KHZ. TWO (2) MIXING AUDIO INPUTS, ONE (1) BALANCED XLR/PHONE INPUT AND ONE (1) UNBALANCED RCA INPUT. CONTROLS FOR INPUT LEVEL, TRANSMIT LEVEL, CONTOUR LEVEL AND STEREO ON/OFF. AUDIO PROCESSOR CAPABLE OF AUTOMATIC GAIN CONTROL AND LIMITING. POWER FOR TWO (2) RADIATORS OVER CAT5 CABLE.	*
113	ALS	ASSISTED LISTENING SYSTEM IR RECEIVER. STETHOSCOPE IR RECEIVER CAPABLE OF RECEIVING ON FOUR (4) CARRIERS (2.3, 2.8, 3.3, 3.8 MHZ) AND THE CHANNEL SHALL BE DISPLAYED ON ONE (1) OF FOUR (4) FRONT PANEL LEDS. THE RECEIVER SHALL BE CAPABLE OF BEING LOCKED ON A CHANNEL. THE RECEIVER SHALL BE CAPABLE OF RECEIVING A STEREO SIGNAL ON EACH OF THE FOUR CARRIERS. SIGNAL TO NOISE RATIO OF 60db, BUILT IN SQUELCH, FREQUENCY RESPONSE OF 63 HZ TO 15 KHZ, AND SHALL OPERATE FOR THIRTY (30) HOURS WITH TWO (2) AAA NIMH RECHARGABLE BATTERIES.	•
114	ANT 2	ASSISTED LISTENING SYSTEM IR RADIATOR/EMITTER. SINGLE CARRIER TRANSMITTING AREA OF 10,000 SQUARE FEET. THREE (3) LED INDICATORS FOR POWER, NO CARRIER PRESENT AND CARRIER PRESENT. RADIATOR/EMITTER SHALL DEACTIVATE AFTER THIRTY (30) MINUTES IF THERE IS NO AUDIO SIGNAL PRESENT FROM THE TRANSMITTER. WALL OR CELLING MOUNT.	_
115	VPS 3	TRANSMITTER. WALL OR CEILING MOUNT. VIDEO PROJECTION SCREEN. FRONT PROJECTION, ELECTRIC, RECESSED CEILING MOUNT, 16:10, 16"H × 104"W. FOR LOCATIONS WHERE THE SCREEN IN NOT BEING CONTROLLED VIA AN A/V CONTROL SYSTEM, PROVIDE WITH A MANUAL CONTROL STATION WHERE SHOWN ON THE DRAWINGS. PROVIDE WRING FROM THE SCREEN MOTION TO THE CONTROL STATION.	•
115	VPS 3	FRAME SYNCHRONIZER, DUAL CHANNEL, VIDEO CONVERTER. SUPPORTS ANALOG COMPONENT OR COMPOSITE, 3G/HD/SD-SDI, DUAL LINK (1.485 Gb), FIBER AND HDMI VIDEO INPUTS AND OUTPUTS. EACH CHANNEL OPERATES AS AN INDEPENDENT FRAME SYNCHRONIZER/FORMAT CONVERTER. UNIT CONTAINS AN	, }
		INTERNAL KEYER. TWO AUDIO PROCESSORS SUPPORT 16—CHANNEL AES/EBU DIGITAL AUDIO, 16—CHANNEL EMBEDDED AUDIO, AND 8—CHANNEL BALANCED ANALOG AUDIO. AUDIO CAN BE EMBEDDED IN ITS ASSOCIATED VIDEO PROCESSOR PATH. BUILT IN DOLBY DECODING. SUPPORTS CLOSED CAPTIONING AND CONVERSION BETWEEN CEA—608 AND CEA—708 CAPTION STANDARDS. UNIT OCCUPIES ONE (1) 1.75" EIA/TIA RACK SPACE. PROVIDE WITH FIBER I/O OPTION.	}

 $\bigoplus \bigcirc$ PLAN TRUE

FULLY SPRINKLERED

PHONE: (314) 835-0524 MECHANICAL/ELECTRICAL/PLUMBING:
KJWW ENGINEERING CONSULTANTS
#15 SUNNEN DRIVE, SUITE 104 Amendment 6 ST. LOUIS, MO 63143

PHONE: (314) 645-1132

Amendment 4

PHONE: (314) 991-2633 CIVIL ENGINEER: STOCK & ASSOCIATES CONSULTING ENGINEERS, INC. 257 CHESTERFIELD BUSINESS PARKWAY CHESTERFIELD, MO 63005 PHONE: (636) 530-9100

AUTOMATIC TRANSPORT: LERCH BATES INC. 8089 S. LINCOLN STREET, SUITE 207 LITTLETON, CO 80122 PHONE: (720) 283-8182 ESTIMATING: KWAME BUILDING GROUP, INC. 1204 WASHINGTON AVENUE, SUITE 200 ST. LOUIS, 40 63103

PHONE: (314) 862 5344

HAZARDOUS MATERIALS: ALTEC ENVIRONMENTAL CONSULTING, LLC P.O. BOX 17867 SHREVEPORT, LA 71138-0867 PHONE: (318) 687-3771 IRRIGATION CONSULTANTS: 9502 BANYON TREE ST. LOUIS, MO 63126 PHONE: (318) 843-1461

CERTIFICATE OF AUTHORITY: JAMES W.

ARCHITECT/ENGINEERS:

THE SEAL (S) AND SIGNATURE(S)
APPLY ONLY TO THE DOCUMENT TO
WHICH THEY ARE AFFIXED, AND WE
EXPRESSLY DISCLAIM ANY
RESPONSIBILITY FOR ALL OTHER
PLANS, SPECIFICATIONS,
ESTIMATES, REPORTS, OR OTHER
DOCUMENTS OR INSTRUMENTS
RELATING TO OR INTENDED TO BE
USED FOR ANY PART OF PARTS OF
THE PROJECT.

168 N. MERAMEC AVENUE | ST. LOUIS, MISSOURI 63105 THE PROJECT.

TEL 314 725 2927 | FAX 314 725 2928 | CHRISTNERINC.COM

USED FOR ANY PART OF PARTS OF THE PROJECT.

© COPYRIGHT 2012 CHRISTNER INC.

Approved: Project Director

TECHNOLOGY MATERIALS LIST

ject Title	
TENANT BUILDING	

DARHAR

Location

29 OCTOBER 2012

657-313D **Building Number** 56 Drawing Number JEFFERSON BARRACKS DIVISION **TN600** Checked Drawn

KEIEVE

Project Number

Dwg. 134 of 153

Office of Construction and Facilities Management

Department of Veterans Affairs

#1 April 4, 2013

No. Date Revisions VA FORM 08-6231

#2 April 12, 2013

one eighth inch = one foot

0 4 8 16